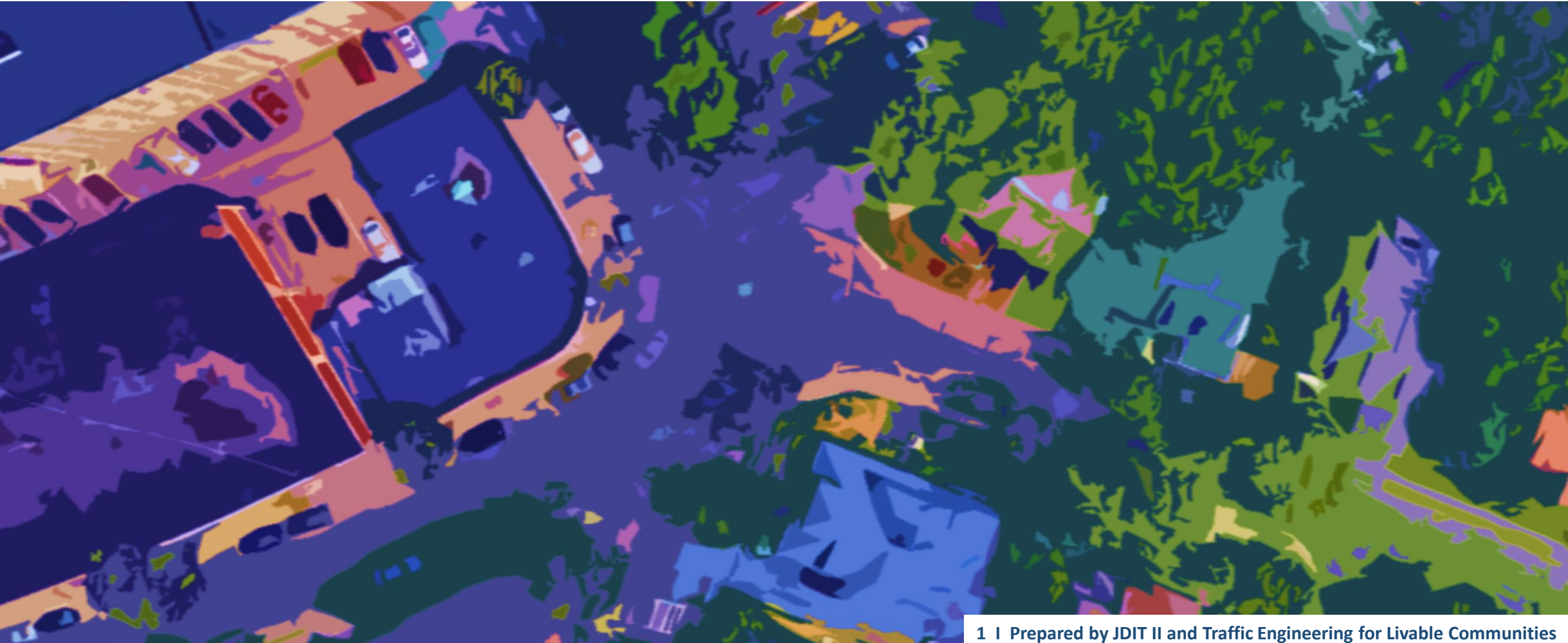


# Re-imagining the intersection at Thorndike, Hamilton, Lawton & Abbottsford Brookline, MA



# PRESENTERS

Consultants for the Town of Brookline

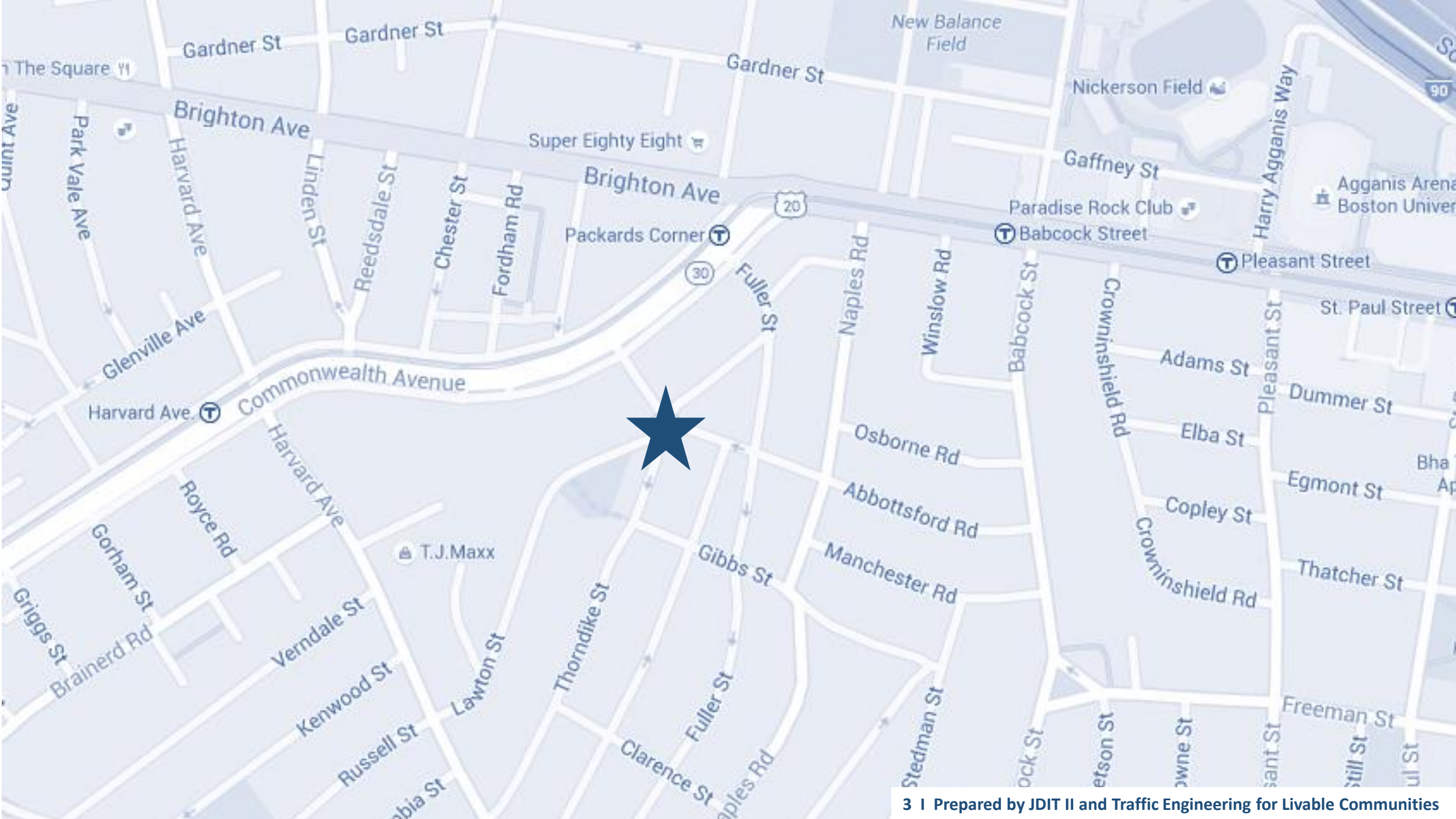


Tom Bertulis, MS, PE, PTOE  
Traffic Engineering for  
Livable Communities

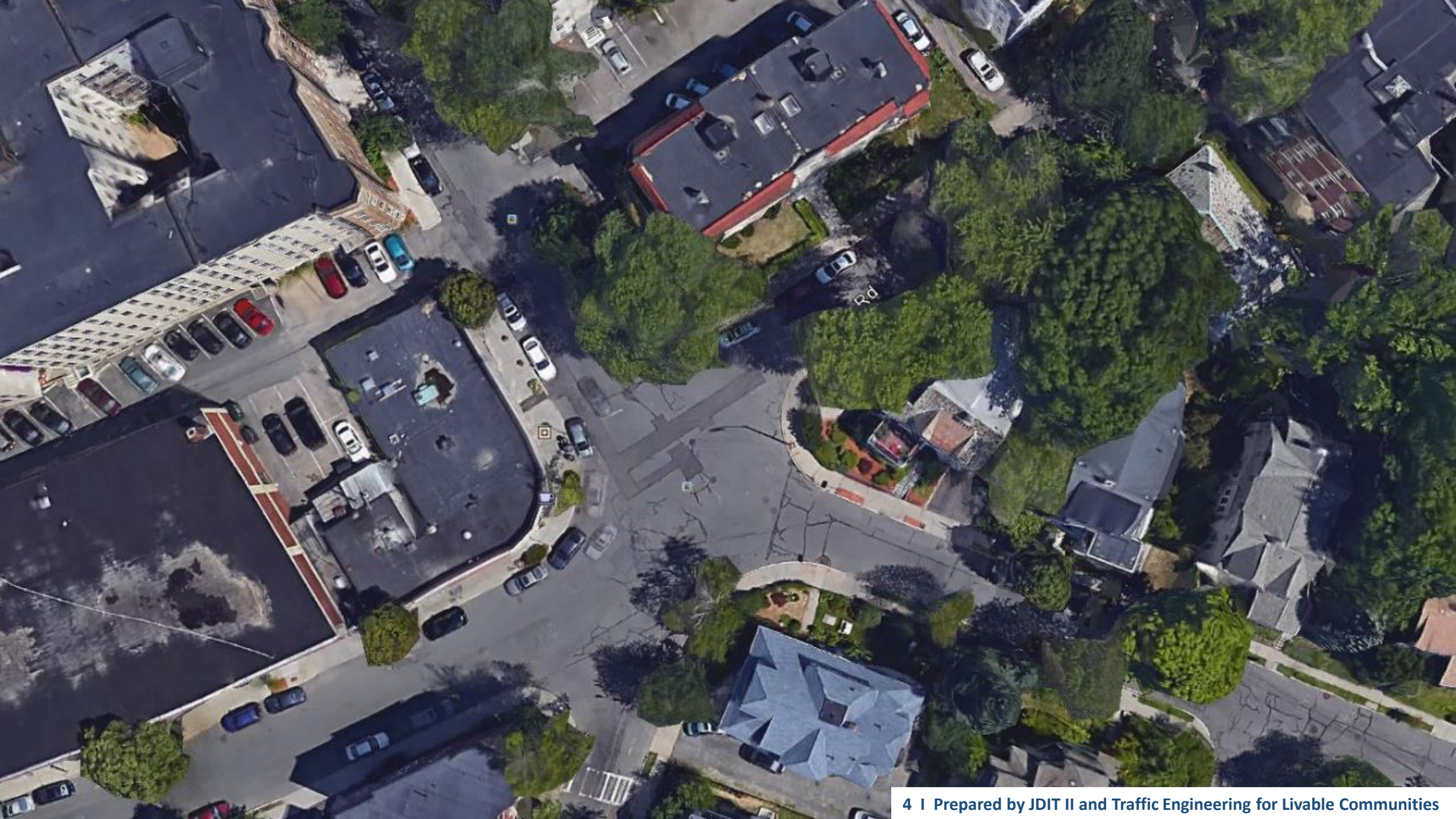


Jackie DeWolfe  
Consultant, JDIT II  
Exec. Dir., LivableStreets













**Commonwealth Avenue, Boston**

**Clear Flour Bakery**

**Bay  
Cove  
Academy**

**Herb Chambers garage entrance**

An aerial photograph of a suburban neighborhood, showing a mix of green trees, grey roofs, and paved roads. The image is slightly faded to serve as a background for the text.

# Presentation contents

1. Purpose
2. Process
3. Proposals



6 concepts  
14 similarities  
2 directions

Developed by  
workshop  
participants





## **PURPOSE**

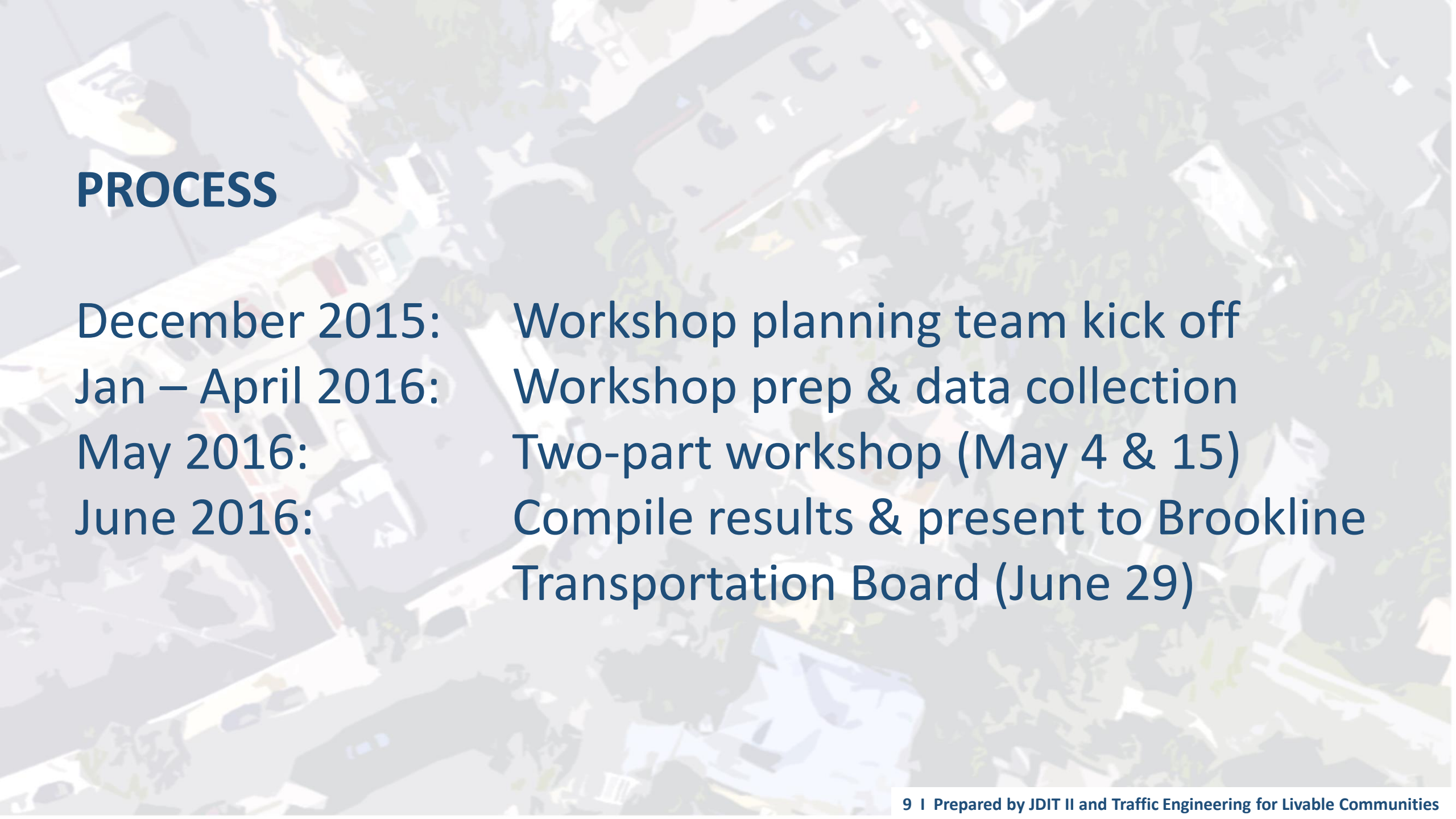
Community visioning process to map solutions

## **Background**

The Town of Brookline received many requests over the years from residents to address safety and speeding concerns, including a request to investigate putting in an all way stop control



# PROCESS



December 2015:	Workshop planning team kick off
Jan – April 2016:	Workshop prep & data collection
May 2016:	Two-part workshop (May 4 & 15)
June 2016:	Compile results & present to Brookline Transportation Board (June 29)



## Planning team

Scott Englander, Brookline Transportation Board

Guus Driessen, Brookline Transportation Board

Todd Kirrane, Brookline Engineering Department

Daniel Martin, Brookline Engineering Department

Kara Brewton, Brookline Economic Development Dept.

Tom Bertulis, Consultant

Jackie DeWolfe, Consultant



An aerial photograph of a city street, showing a car and a person walking. The image is faded and serves as a background for the text.

## Workshop prep & data collection

- Experience space, observe desire lines, & document
- Analyze existing data & gather data
- Outreach to residents, business & land owners
- Conduct online survey







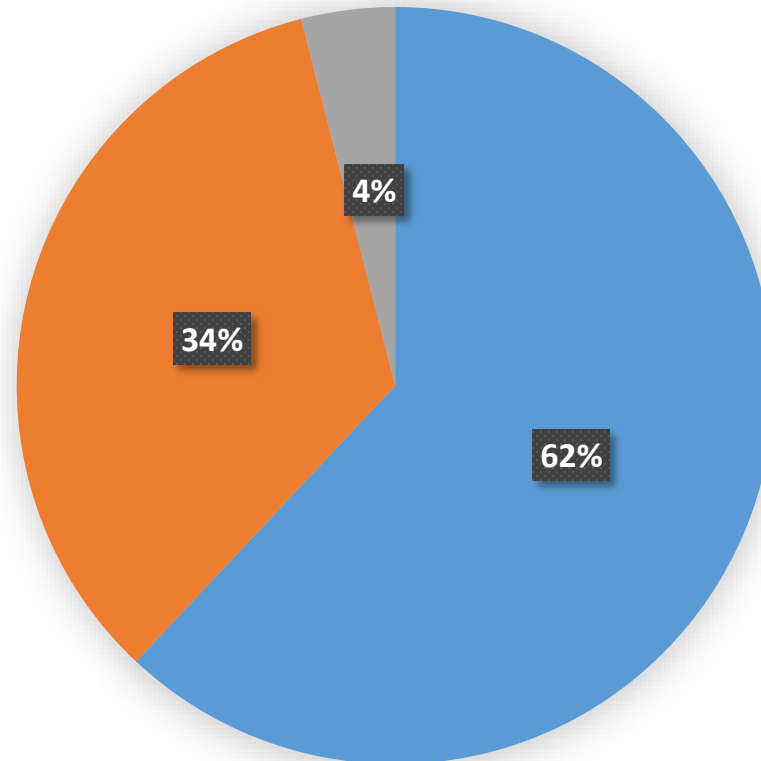
**Seasonal  
observations too!**



Photo credit: Rebecca Albrecht

# Travel Intercept Survey: How do people get to Clear Flour Bakery?

4% people bike  
34% people walk  
62% people drive



April 9 – 14<sup>th</sup>, 2016

Sat 9-11 AM

Tues 9-11 AM, 3:30-5:30 PM

Thurs 9-11 AM, 3:30-5:30 PM

## Survey conducted by Town staff at peak/busiest bakery hours

Conducted at the same time as the parking utilization study



# Parking utilization study

Conducted  
at the same  
time as the  
travel  
intercept  
survey



## Parking utilization study

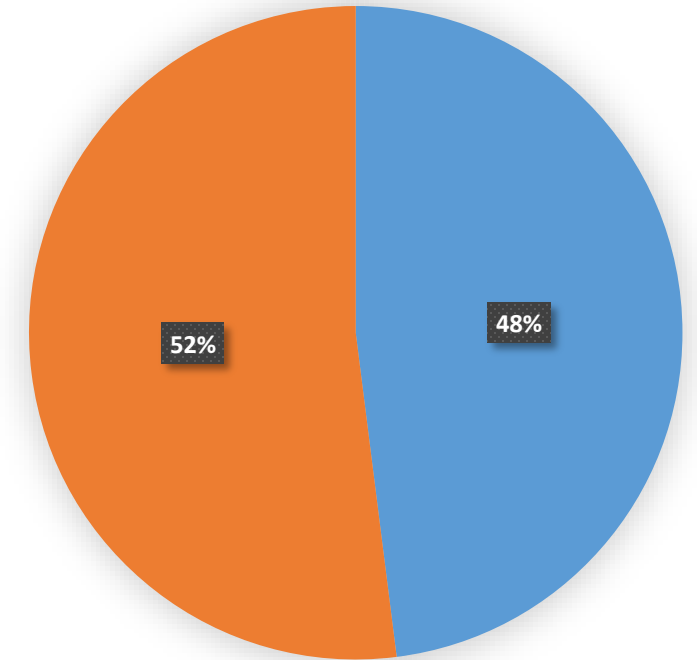
Average results during peak bakery hours

Tuesday: 49 / 90 spaces available

Thursday: 45 / 90 spaces available

Saturday: 46 / 90 spaces available

Available Parking Spots (in orange)



Over 3 days, an average of 52% of parking spots were available within one block. Counts conducted by Town staff.

Conducted at the same time as the travel intercept survey







## Crash and speed data

Between 2009 and 2016, 3 crashes were reported at the intersection, of which 2 involved parked cars.

Note: not all crashes are reported

Speed limit is 30 mph



**Identified need  
to accommodate  
heavy vehicles  
due to  
commercial  
businesses,  
school, and  
resident  
deliveries**





## Conducted outreach and resident survey

- Snail mailed all Brookline residents 800 ft radius from intersection
- Posted signs in area about workshop
- Outreach to Town Meeting Members, neighborhood associations, businesses, school, land owners
- Online RSVP and survey

31 residents completed the following survey questions:

- How do you travel around and through the intersection?
- What do you like about this area?
- If there is something you could change, what would it be and why?



## **Conducted two part workshop at Bay Cove Academy**

Part I: Wednesday, May 4, 6 – 8 PM

Part II: Sunday, May 15, 10 AM – 1:30 PM

Intended outcomes of the workshops:

- Shared understanding of challenges of intersection
- Determine who we are prioritizing space for
- Learn new ideas & opportunities
- Design alternatives for the space







## Workshop participants

45 people who

<b>Work</b>	12
<b>Play</b>	19
<b>Shop</b>	40
<b>Study</b>	5
<b>Live</b>	37

in the area



## Summary of what we heard – the biggest issues are...

“large, undefined, confusing”

“not friendly for people walking”

“high speeds on streets leading to intersection”

“lack of outdoor seating, bike racks, flowers”

“not bike friendly”

“skateboarders at midnight”





## Summary of what we heard – the area needs...

“a traffic circle”

“benches”

“wider sidewalks”

“contraflow bike lanes”

“food forest”

“bike parking”

“nothing. Like the way it is.”

“tighten geometry of intersection”

An aerial photograph of a city street grid, likely in a downtown area, with a semi-transparent blue overlay. The text is overlaid on this image.

## Summary of what we heard – what do you like about it...

“Clear Flour Bakery”

“everything”

“it’s potential”

“love the way I can walk straight across the middle”

“quaintness”

“existing stores”

“curviness”

“openness”

“vitality and level of activity”



# Who should we be designing for?

Ranking in priority order

<b>1</b>	People walking	Peds	Peds	Peds / cars	Peds
<b>2</b>	People biking	Trucks	Bikes	Trucks	Bikes
<b>3</b>	Cars / taxi	Cars	Parked cars		Cars
<b>4</b>	Trucks		Moving cars		Buses
<b>5</b>			Buses / trucks		Carpools
<b>6</b>					Trucks

Developed by workshop participants in 5 groups

# Recommended tools to improve the intersection



Bike parking “corral”



Curb extensions



Traffic circle “mini-  
roundabout”



Crosswalks



**Continued...  
Recommended  
tools to  
improve the  
intersection**



**Raised crosswalk**



**Seating “parklet”**



**Painted intersection**



**Painted traffic circle**



**Recommended  
tools to  
improve the  
approaches to  
the intersection**



**Wider sidewalk**



**Painted streets**






**Traffic calming**



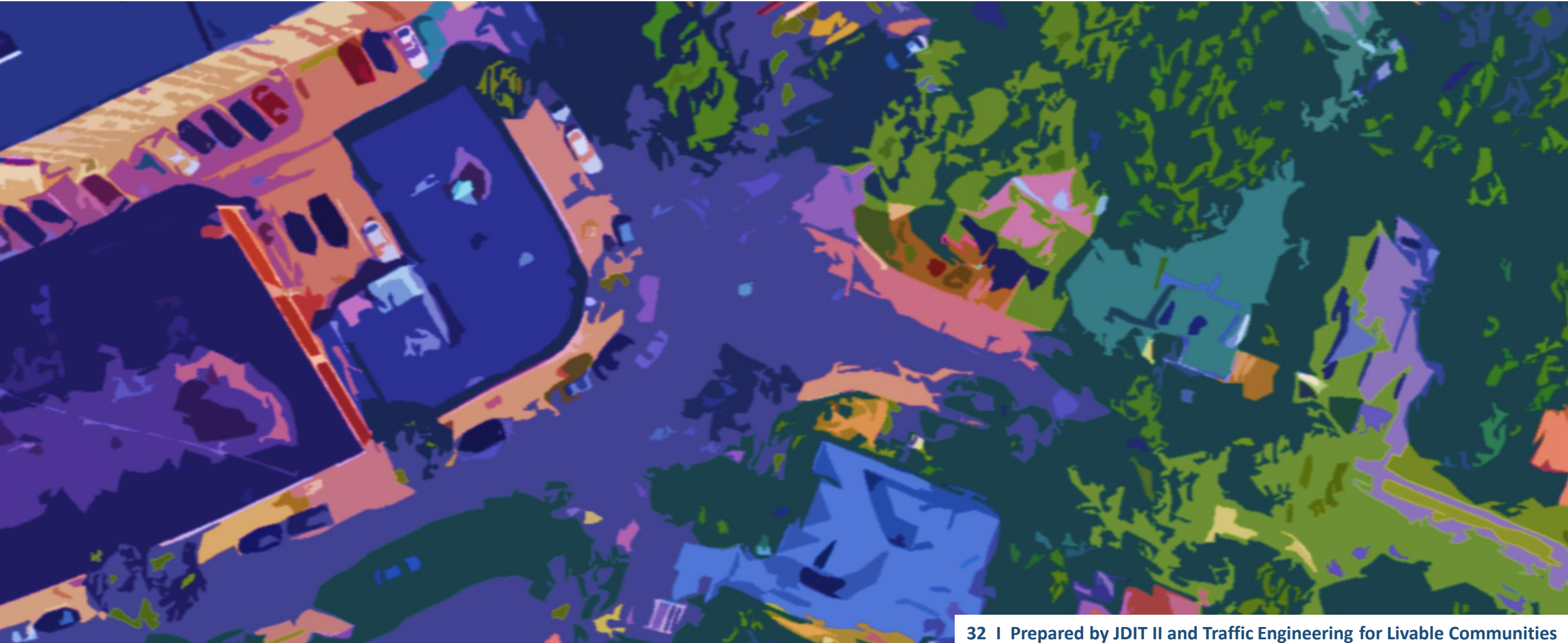
**Traffic calming chicane**



## Why not just a stop sign or four-way stop?

- Unusual intersection: sight distance issues require a creative approach 
- Stop sign: no guarantee a motor vehicle will stop 
- Desire lines don't match where crosswalks would go if following regulations 

# Re-imagining the intersection at Thorndike, Hamilton, Lawton & Abbottsford PROPOSALS





6 concepts  
14 similarities  
2 directions

Developed by  
workshop  
participants



# 14 similarities – consensus among workshop participants

1. Raised elements
2. Allow people to walk at desire lines (i.e. through middle of intersection)
3. Bike parking corral
4. Bump out seating somewhere
5. Raised crossing between parks on Lawton Street
6. Marked crossing in front of school
7. Contraflow bike lane on Abbotsford
8. Desirable to reduce speed on Abbotsford to Lawton, and Thorndike to Lawton
9. Explore removing 8-10 AM parking restriction
10. Create a true left turn from Abbotsford to Lawton
11. Okay to remove parking in intersection, especially at Abbotsford
12. Pedestrian scale lighting and plantings
13. Clearer ADA signage on Lawton to tell people it's a ramp, not parking
14. Aesthetic improvements



## #5 Raised pedestrian crossing from park to park across Lawton St



An aerial photograph of a city street intersection featuring a traffic circle. The image is faded and serves as a background for the text overlay.

## **2 DIRECTIONS**

**1. Painted traffic circle “mini-roundabout”**

**1A. Raised traffic circle “mini-roundabout”**

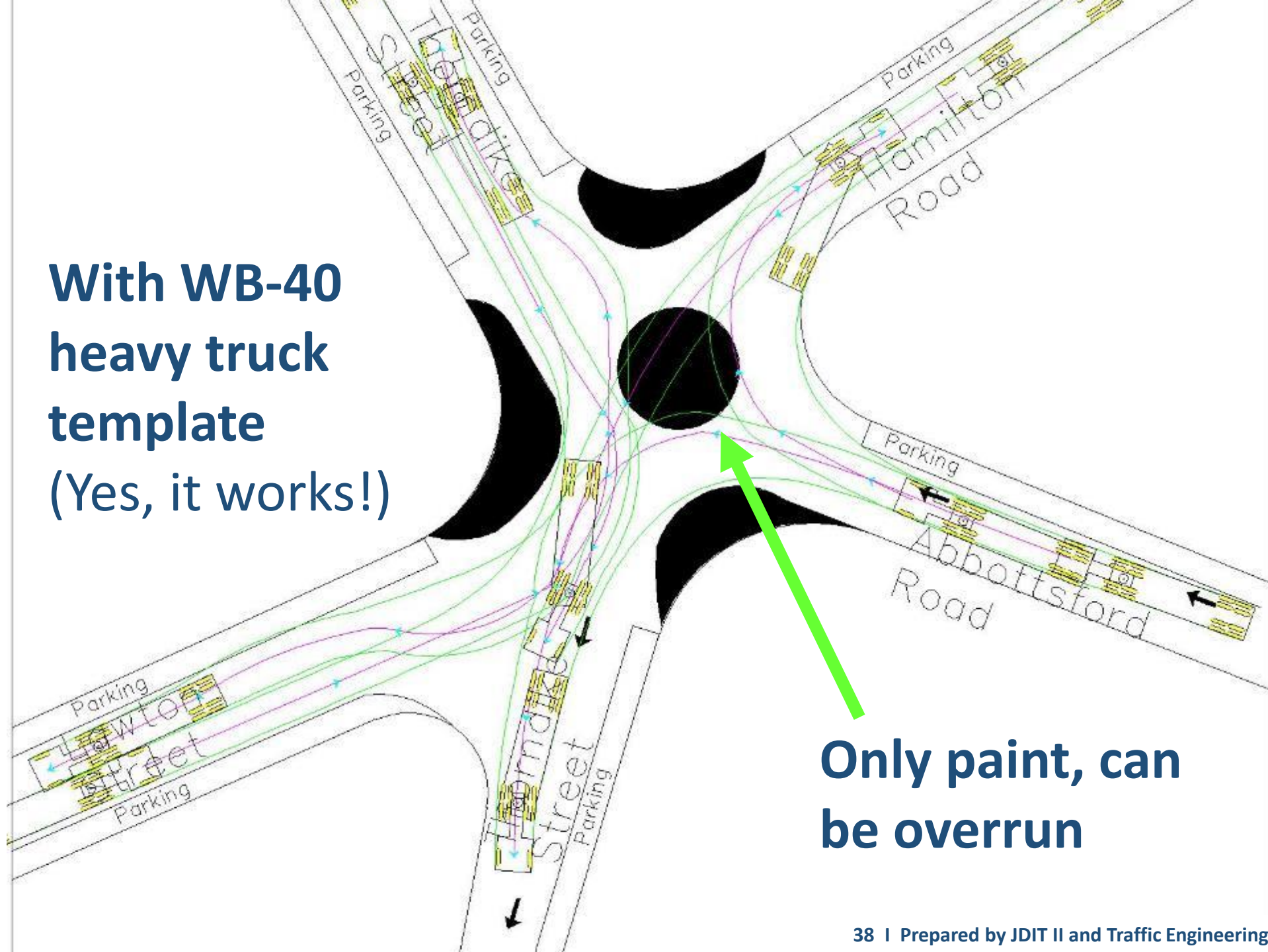
**2. Raised intersection**



# 1. Painted traffic circle “mini-roundabout” with bulb outs



**With WB-40  
heavy truck  
template  
(Yes, it works!)**



**Only paint, can  
be overrun**



# Some options for bulb outs





An aerial photograph of a city street intersection featuring a painted traffic circle, also known as a mini-roundabout. The circle is marked with white paint on the asphalt. The surrounding area includes residential buildings, trees, and other street features.

# Painted traffic circle “mini-roundabout”

## Advantages

- Inexpensive
- The design incorporates bulb outs
- Adds to uncertainty and intrigue principle than adds to safety
- Allows greater freedom of where pedestrians cross

## Disadvantages

- Not as effective in traffic calming as raised features
- May be confusing for drivers not used to roundabouts
- May still be occasional drivers not yielding to pedestrians

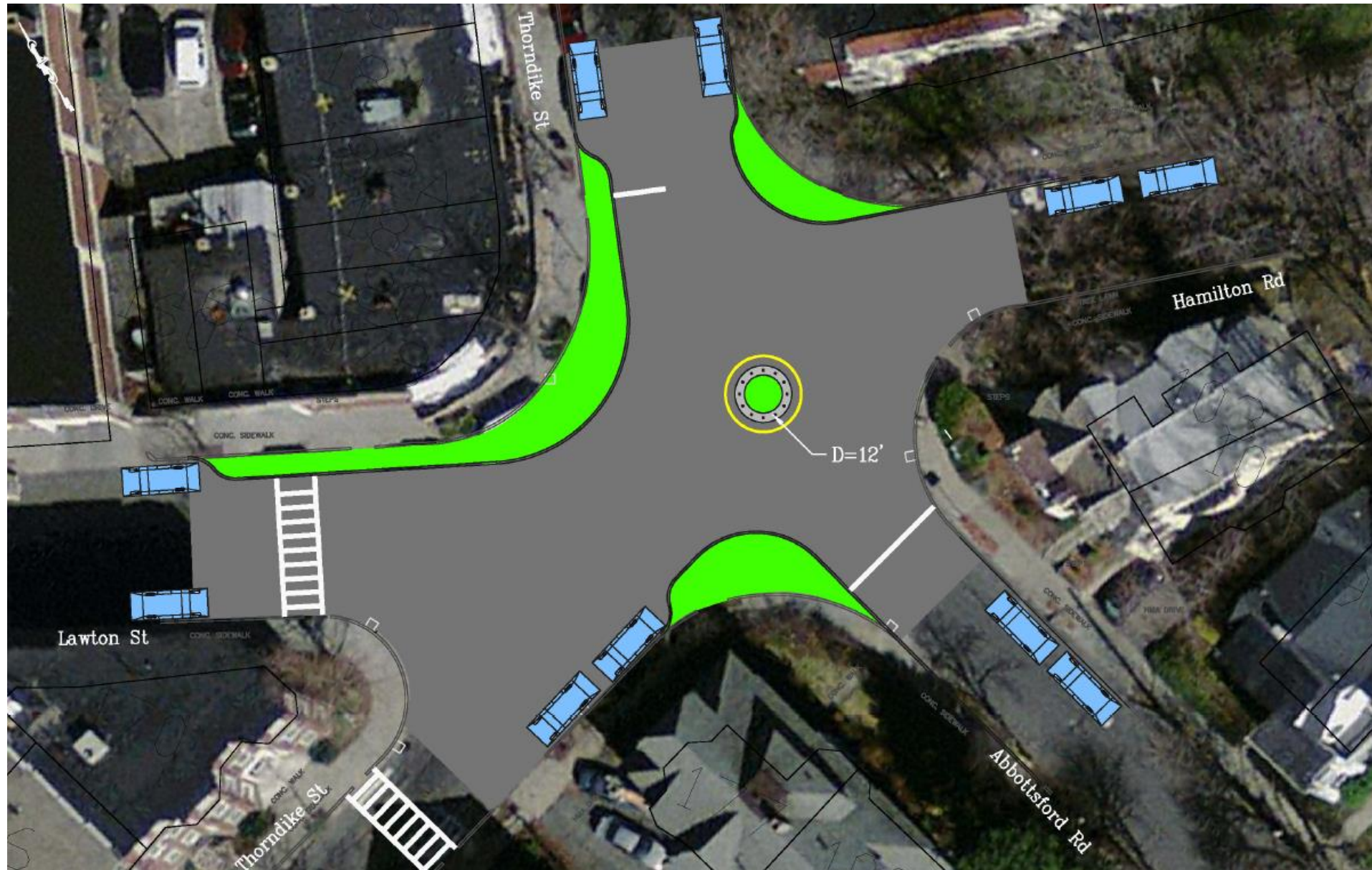


# 1A. Raised traffic circle “mini-roundabout” with bulb outs





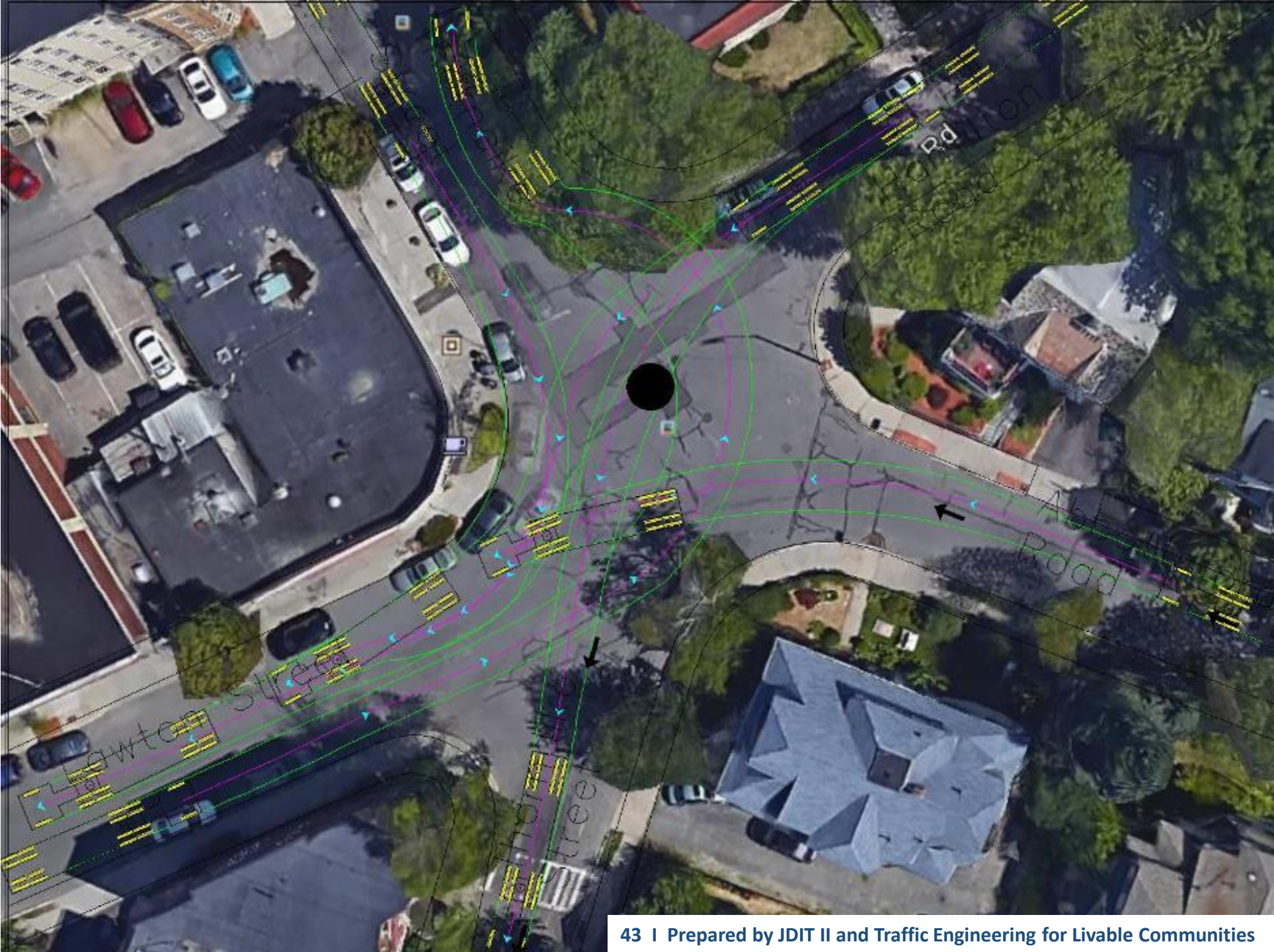
Raised  
traffic  
circle  
“mini-  
roundabout”  
with no  
crosswalks





Large raised  
roundabout  
does not  
work for  
heavy vehicles.

Smaller raised  
roundabout could  
be explored





# Raised traffic circle examples

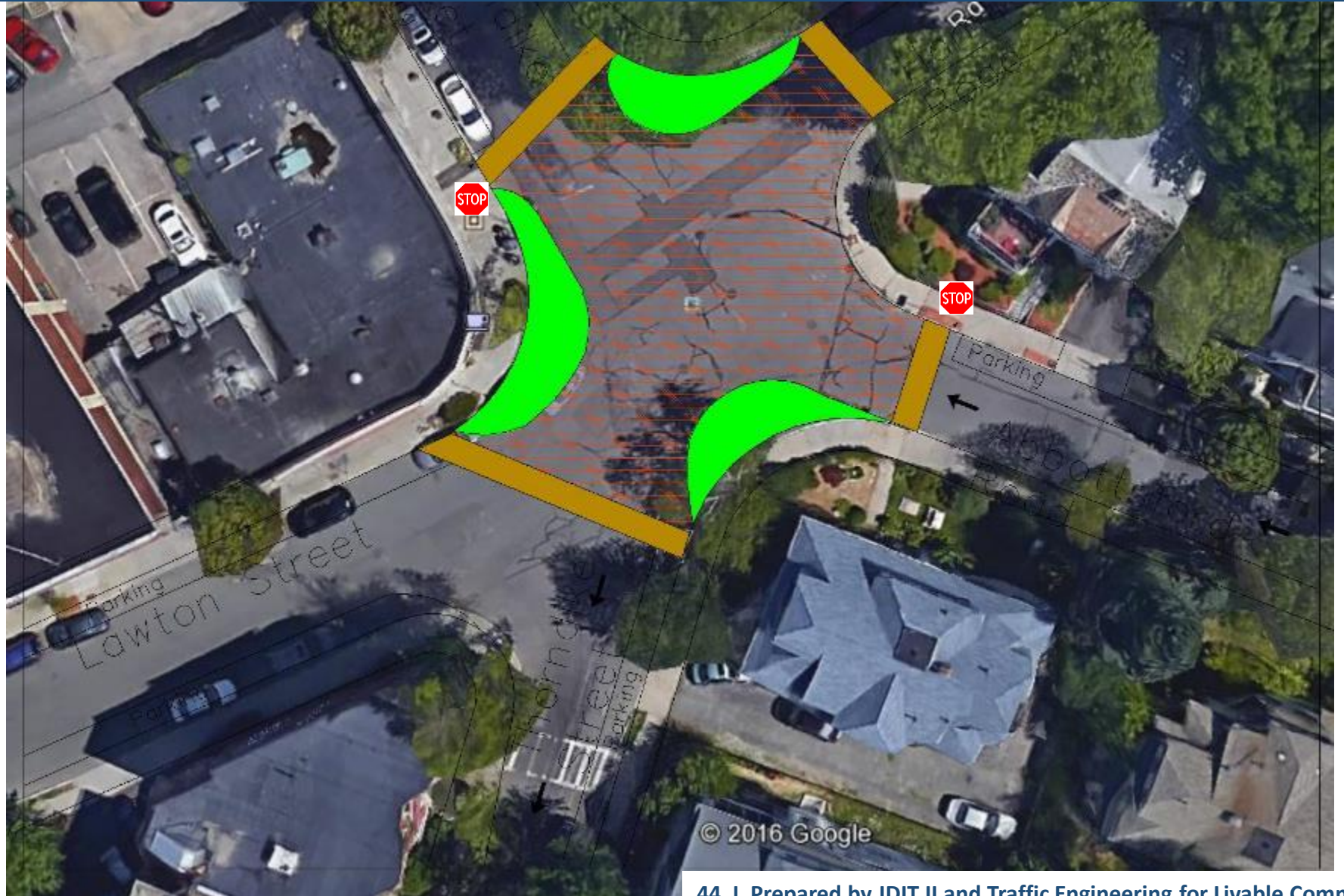




## 2. Raised intersection with bulb outs

Bulb outs can be used for seating, plantings, etc.

Existing stop sign at Thorndike, new stop sign at Abbottsford Rd





# Raised intersection examples





An aerial photograph of a residential neighborhood, showing houses, trees, and a street intersection. The image is faded and serves as a background for the text.

# Raised intersection

## Advantages

- More effective in traffic calming than painted features
- The design incorporates bulb outs
- Sinusoidal curves are bike-friendly
- The low speeds are pedestrian friendly; pedestrians don't have to cross at crosswalks and can cross anywhere

## Disadvantages

- Higher cost
- Possible drainage design issues



# Some options for bulb outs





# Parking impacts

Eight (8) parking spaces lost (in red) with bulb outs – all eight (8) spots are not legal parking spots anyway



# Cost

## **Tactical Urbanism provides short-term fixes at low cost:**

- Paint for intersection repair and tactical urbanism: \$7.50 for 16 oz jar of acrylic paint
- Thermoplastic: \$2.00 per linear foot
- Street tree: \$573-1,000 each
- Bench: \$1,700 each
- Semi-permanent parklets range from \$15,000-\$20,000

## **Permanent fixes tend to cost more:**

- Raised crossing: \$20,000
- Raised intersection: \$50,540
- Mini traffic circle: \$15,000
- Pedestrian scale lighting: \$4,880 per streetlight



# Thank you!

Special thanks to Bay Cove Academy for hosting workshops  
& thank you to all participants for your input and time

## Questions?

